

REMARKS

The Applicant wishes to thank the Examiner for his examination of the present application and for the Examiner's interview of August 3, 2005 at which time the present remarks were discussed. Claims 32-37 have been added, and claims 1, 8 and 15 have been amended. New claim 32 reflects claim 4 including all limitations of original claim 1 (found to be allowable in the office action dated June 25, 2004), while new claims 33 to 37 include matter corresponding to claims 2, 3 and 5-7 respectively. Claims 1 and 8 have been amended to require that the amplifier output is coupled to the common node such that there is no intervening switch between the amplifier output and the common node. For support in the specification, see Figs. 1 and 2. Claim 15 has been amended to require that the first stage has a first stage input, a first stage output, and an output feedback loop feeding the first stage output back to the first stage input, the output feedback loop including an output switch, the output switch when in an off state interrupting the output feedback loop. For support in the specification, see Figs. 1 and 2. No new matter has been added.

35 U.S.C. §132(a)

The amendment filed March 31, 2005 is objected to under 35 U.S.C. §132(a) as introducing new matter. More particularly, the office action states that the added material not supported by the original disclosure is the new language in claims 1-3 and 6-14 reciting that the "common mode" is "coupled in an unswitched manner with and driven by the amplifier output." Claims 1 and 8 have been amended to clarify that "the amplifier output is coupled to the common node such that there is no intervening switch between the amplifier output and the common node." For support in the specification, see Fig. 2 which shows a common node between an input switch (designated S3B) and an output switch (designated S3A). An amplifier output (i.e., the output of the amplifier associated with the SHA) is coupled to the common node such that there is no intervening switch between the amplifier output and the common node. Accordingly, it is submitted that amended claims 1 and 8, and claims 2, 3, 6, 7, and 9-14 do not introduce new matter and comply with the requirements of 35 U.S.C. §132(a).

35 U.S.C. §112, 1st paragraph

The office action rejected claims 1-3, 6-14 and 29-31 under 35 U.S.C. §112, first paragraph, as containing subject matter which was not introduced in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention. In particular, the office action asserts that the original specification fails to disclose that the “common node” is “coupled in an unswitched manner with and driven by the amplifier output.” Claims 1 and 8 have been amended to clarify that “the amplifier output is coupled to the common node such that there is no intervening switch between the amplifier output and the common node.” For support in the specification, see Fig. 2 which shows a common node between an input switch (designated S3B) and an output switch (designated S3A). An amplifier output (i.e., the output of the amplifier associated with the SHA) is coupled to the common node such that there is no intervening switch between the amplifier output and the common node. Accordingly, Applicant submits that the instant claims are fully enabling and comply with the requirements of 35 U.S.C. §112, 1st paragraph.

35 U.S.C. §112, 2nd paragraph

Claims 15 and 18-20 are rejected under 35 U.S.C. §112, 2nd paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicants regard as the invention. More particularly, the office action asserts that in claim 15, line 3, there is no support for the “output switch” always being in “an off state,” and in lines 7-8, that it is unclear how “the output switch” can be maintained “in an on state during a specified time interval when line 3 states its in “an off state.” Claim 15 has been amended to require “the output switch *when* in an off state interrupting the output feedback loop” (emphasis added). For support in the specification, see Fig. 2, switch S3A. Accordingly, Applicant submits that the instant claims comply with the requirements of 35 U.S.C. §112, 2nd paragraph.

35 U.S.C. §102

Claims 15-20 stand rejected under 35 U.S.C. §102, second paragraph, as being anticipated by U.S. patent number 4,170,740 (Pernyeszi).

Amended claim 15 defines, in part, a multi-stage switched capacitor circuit having a first stage having a first stage input, a first stage output, *and an output feedback loop feeding the first stage output back to the first stage input* (emphasis added). The output feedback loop includes an output switch. The circuit also has a means for applying a bootstrap voltage to the output switch and the input switch, the bootstrap voltage maintaining the input switch and the output switch in an on state during a specified time interval.

Pernyeszi fails to disclose the combination of: a first stage having an output feedback loop feeding the first stage output back to the first stage input, the output feedback loop including an output switch; and a bootstrap module that applies a bootstrap voltage to the output switch to maintain the output switch in an on state during a specified time interval. The office action suggests that Pernyeszi discloses a first stage (connected to 52) having an input switch 48 and a second stage (connected to 54) having an output switch (50); and a bootstrap module (rest of the circuit). The office action then further suggests that switch 48 in Pernyeszi is clearly in a feedback loop via the common node and circuit 10. However, the feedback loop suggested by the office action feeds the first stage output back to circuit 10 (i.e., the bootstrap module as defined by the office action, which is capable of maintaining the output switch 50 in an on state). In contrast, claim 15 requires that the output feedback loop feeds the first stage output back to the first stage input. Accordingly, claim 15 is allowable over the prior art. Dependent claims 18-20 are allowable for the same reason.

Applicant notes in the previous office action dated October 29, 2004 that claims 1-3 and 6-14 were rejected under 35 U.S.C. §103(a) as being unpatentable over Hui et al. (U.S. Patent No. 5,808,502, hereinafter Hui) in view of O'Neill (U.S. Patent No. 4,024,349). As the subject office action indicated that the new matter issues prevented determination of allowable subject matter with regard to claims 1-3 and 6-14, Applicant addresses this rejection below.

Claim 1 defines, in part, a multi-stage circuit having a first stage with an output switch, and a second stage with an input switch. A bootstrap module is in communication with both switches. The first stage has an amplifier with an amplifier output. The circuit further includes a common node between the input switch and output switch, the amplifier output coupled to the common node such that there is no intervening switch between the amplifier output and the common node.

Hui discloses a first station (connected to A0) having an input switch 30L, and a second station (connected to B0) having an output switch 30R (see Hui at Fig. 9). However, Hui fails to disclose an amplifier output connected between the input switch 30L and output switch 30R such that there is no intervening switch between the amplifier output and the common node. O'Neill discloses various amplifiers 315 and 322 in a quasi-resonant transfer conferencing circuit (see Fig. 1 of O'Neill).

The combination of Hui and O'Neill fails to form applicant's invention. The office action states that based on O'Neill, it would have been obvious to use an amplifier to output buffer the signals of the stations in Hui connected to A0. However, this would couple an amplifier output to A0 (or B0) of Hui, but would not couple the amplifier output to the common node such that there is no intervening switch between the amplifier output and the common node, as required by claim 1.

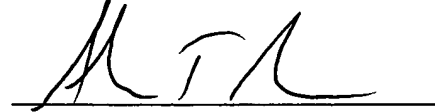
Accordingly, since the combination of Hui and O'Neill fails to teach or suggest applicant's invention, amended claim 1 is allowable over the combination of Hui and O'Neill. Claims 2, 3, 6 and 7 depend on and incorporate independent claim 1, and are allowable for the same reasons as discussed above with regard to claim 1, and are further allowable in view of the additional limitations set forth therein. Amended claim 8 also requires a common node between the input switch and output switch, the amplifier output coupled to the common node such that there is no intervening switch between the amplifier output and the common node. Thus, claim 8 and dependent claims 9-14 and 29 are also allowable for the same reasons as discussed above with regard to amended claim 1, and are further allowable in view of the additional limitations set forth therein.

Applicant believes that no extension of time is required; however, this conditional petition is being made to provide for the possibility that the applicant has inadvertently overlooked the need for an extension of time. If any additional fees are required for the timely consideration of this application, please charge deposit account number 19-4972. It is believed that the application is in condition for allowance.

Appl. No. 09/932,216
Reply to Office Action of May 6, 2005

Consideration of the application and issuance of a notice of allowance are respectfully requested. Applicant requests that the Examiner contact the undersigned, Alex Smolenski, either by telephone (617-443-9292) or by email (asmolenski@bromsun.com) to arrange for an interview if this response is not deemed satisfactory.

Respectfully submitted,

A handwritten signature in dark ink, appearing to read 'A. J. Smolenski', is written over a horizontal line.

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